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10/772,430

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EXAMINER

EGLOFF, PETER RICHARD

ART UNIT

PAPER NUMBER

3715

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/772,430	Applicant(s) MAKUTA ET AL.	
	Examiner PETER R. EGLOFF	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 25 February, 2009, claims 1-20 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US Patent No. 6,083,106) in view of Yamasaki et al. (US Patent No. 5,547,382) and McClellion (US Patent No. 7,156,026 B2).

Regarding claims 1, 3 and 4, McDowell discloses a riding simulation system for providing an operator with a pseudo-experience of running conditions of a vehicle by displaying scenery seen to the rider as a video image on a display based on the operating condition of operation by the operator (see abstract), the riding simulation system comprising: a steering

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handle mechanism (28) gripped and operated by the operator (Fig. 1; column 5, lines 50-67), a step mechanism comprising two pedals which are operated by the feet of the operator (see Fig's. 1 and 2; column 6, lines 28-39), a connection shaft for connecting said steering handle mechanism and said step mechanism to each other, said connection shaft provided to be extendable and contractible along the axial direction thereof (column 6, lines 7-22), and a frame body (see Fig. 2) (as per claim 1). McDowell does not explicitly disclose the riding simulation system is used to simulate riding a motorcycle, and that the foot controls are a gear change and a brake pedal, as in a real motorcycle, a frame body having a cylindrical portion and at least two main frames that are directly attached to the cylindrical portion, the at least two main frames having curved shapes, and the steering handle mechanism is mounted at upper is mounted at upper portions of the cylindrical portion and the connection shaft is disposed midway between and is supported by lower portions of the at least two main frames (as per claim 1), a vibrator for a dummy engine vibration (as per claim 3), and means for giving a reaction force in a direction opposite to a turning direction of said steering handle mechanism (as per claim 4). However, Yamasaki discloses a motorcycle riding simulator that includes a step mechanism comprising a brake pedal and a gear change pedal which are operated by the feet of the rider (see Fig. 33; column 6, lines 1-29; column 16, lines 45-61) (as per claim 1), a vibrator for a dummy engine vibration (column 16, lines 22-27) (as per claim 3), and means for giving a reaction force (see Fig. 28; column 14, lines 55-65) (as per claim 4). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of McDowell by using McDowell's system to simulate riding a motorcycle by adding gear change and brake pedals, a vibrator, and means for giving a reaction force, as taught by Yamasaki, with the motivation of providing a

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realistic riding experience to the rider. The combination of McDowell and Yamasaki does not explicitly disclose a frame body having a cylindrical portion and at least two main frames having upper portions that are directly attached to the cylindrical portion and lower portions that are connected via a connection frame, the at least two main frames having curved shapes, and the steering handle mechanism is mounted at upper is mounted at upper portions of the cylindrical portion and the connection shaft is disposed midway along the connection frame which extends orthogonally with respect to the lower portions of the at least two main frames (as per claim 1). However McClellion discloses driving simulation device that includes a frame body comprising a cylindrical portion (30) and two main frames (16a and 16b) directly attached to the cylindrical portion, the two main frames having curved shapes, and the steering handle mechanism (32) is mounted at upper portions of the cylindrical portion. It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of the combination of McDowell and Yamasaki by adding the frame body taught by McClellion in addition to the connection shaft taught by McDowell, to connect the upper portions of McClellion's frames to McDowell's cylindrical portion and the lower portions via the base 22, and to provide the connection shaft orthogonally with respect to the lower portions, as taught by McDowell, with the motivation of providing more structural support to McDowell's system.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US Patent No. 6,083,106) in view of Yamasaki et al. (US Patent No. 5,547,382) and McClellion (US Patent No. 7,156,026 B2), and further in view of Simpkins et al. (US Patent No. 5,431,569).

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Regarding claim 2, the above combination does not explicitly disclose the connection shaft is provided to be inclinable relative to said step mechanism, however Simpkins discloses a simulator chair capable of simulating a motorcycle (column 7, lines 8-16) that includes the feature of allowing the foot controls (144) to be inclinable relative to the connection shaft (33) (see column 5, lines 23-39 and Fig. 1). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of the above combination by adding the feature of allowing the foot controls to pivot relative to the connection shaft, with the motivation of accommodating users of different sizes.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Patent No. 5,547,382) in view of Uebel (US Patent No. 4,199,264).

Regarding claims 5 and 6, Yamasaki discloses a riding simulation system for providing an operator with a pseudo-experience of a running condition of a motorcycle by generating a vibration based on the operating condition by the operator, said riding system comprising a vibrator (175c) for a dummy engine vibration in a steering handle mechanism, the vibrator includes an eccentrically mounted weight mounted on a motor shaft extending from an outer end of the vibrator (as per claim 5), and a riding simulation system comprising a vibrator for a dummy engine vibration in a steering handle mechanism and providing an operator with a pseudo-experience of a running condition of a motorcycle by generating a vibration based on the operating condition by the operator, the vibrator including an eccentrically mounted weight (as per claim 6). Yamasaki does not explicitly disclose the vibrator is formed with left and right flat sides and curved top and bottom sides, and including a taper surface portion formed at an inner

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circumferential surface of a steering handle pipe constituting said steering handle mechanism, said taper surface portion gradually decreasing in diameter from the side of an end portion of said steering handle pipe, and a bracket having an engaging portion for engagement with said end portion of said steering handle pipe, having an outer circumferential surface gradually decreasing in diameter from the side of said engaging portion, and being inserted into said taper surface portion while holding said vibrator, wherein the bracket includes a pair of brackets, wherein each of the brackets includes a recess on an inner surface thereof, and when the brackets are mated directly together, the recesses of the mating brackets form a space in which the vibrator is disposed, wherein the recesses of the brackets have flat rectangular-shaped inner faces that oppose each other for receiving the left and right flat side of the vibrator, and the eccentrically mounted weight is disposed in a portion of the brackets that is separate from each of the recesses (as per claim 5), and a bracket having a hollow space, the bracket being screw-engage with an end portion of a steering handle pipe constituting said steering handle mechanism, wherein said vibrator is inserted into an inside of said steering handle pipe in a state of being held by said bracket, wherein the vibrator is formed with two parallel flat sides and curved top and bottom sides, wherein a first portion of the hollow space is enclosed and includes two flat rectangular-shaped inner faces that are parallel to each other for receiving the two parallel flat sides of the vibrator, and wherein the vibrator includes an eccentrically mounted weight mounted on a motor shaft extending from an outer end of the vibrator so as to be disposed in a second portion of the hollow space that is separate from the first portion (as per claim 6). However, Eubel discloses an unbalanced weight vibrator that includes a taper surface portion (7 - see column 4, lines 2-3), a bracket having an engagement portion wherein the bracket includes a

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pair of brackets (37 and 40), wherein the brackets include recesses (44) and the weight is disposed in a portion of the brackets separate from the recesses (column 5, lines 24-66) (as per claim 5), and a bracket with a hollow space wherein a first portion of the hollow space is enclosed and includes two flat inner faces that are parallel for engaging the vibrator, and a weight on a motor shaft disposed in a second portion of the hollow space (column 5, lines 24 - 66) (as per claim 6). Eubel does not explicitly disclose the vibrator is screw engage with the pipe, as required, however as Official Notice was taken in the previous Office Action dated 6/25/2007 and not traversed, this feature is now admitted prior art. Eubel also does not explicitly disclose the vibrator is formed with two parallel flat left and right sides and curved top and bottom sides, and the recesses have rectangular-shaped inner faces for receiving the flat left and right sides. However, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to form the vibrator with any desired shape, including the claimed left and right flat sides and curved top and bottom sides. Applicant has not disclosed that this shape provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill, furthermore, would have expected Eubel's round vibrator, and Applicant's shape, to perform equally well with either shape of vibrator, provided the bracket recesses are shaped to conform to the shape of the vibrator, as Eubel's mechanism teaches. Therefore, it would have been obvious to modify Eubel to obtain the invention as specified because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Eubel.

Furthermore, it would have been obvious to one skilled in the art at the time of the invention to secure the vibrator bracket of Eubel's system with a screw or screws, with the

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motivation of securing the bracket and vibrator in place, and to attach this vibrator system to the handlebar shaft in place of the vibrator disclosed by Yamasaki, with the motivation of propagating the most possible vibration to the shaft.

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Patent No. 5,547,382) in view of Uebel (US Patent No. 4,199,264), and further in view of Sagara et al. (US Patent No. 5,050,587).

Regarding claims 7 and 8, Yamasaki discloses a riding simulation system comprising a vibrator for a dummy engine vibration in a steering handle mechanism and providing an operator with a pseudo-experience of a running condition of a motorcycle by generating a vibration based on the operating condition by the operator (see Fig. 36; column 17, line 22-37) (as per claim 7), wherein the steering handle grip is a throttle grip (see Fig. 36; column 17, lines 35-37) (as per claim 8). Uebel discloses the vibrator mechanism cited above in the rejections of claims 5 and 6 using an eccentric weight, but does not disclose using an eccentric cam instead of an eccentric weight. However, Sagara discloses that the substitution of a cam for a weight is old and well known (column 1, lines 16-26). It would have been obvious to one skilled in the art to modify the teachings of the combination of Yamasaki and Uebel by substituting the well known cam for the weight taught by Uebel, with the motivation of providing a more light-weight design.

8. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Patent No. 5,547,382) in view of Uebel (US Patent No. 4,199,264) and

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Sagara et al. (US Patent No. 5,050,587), and further in view of Clarkson (US Patent No. 6,122,991).

Regarding claims 9 and 10, Yamasaki and Uebel do not explicitly disclose the steering handle pipe is comprised of a single pipe communication one end portion, on which the throttle grip is mounted, and the other end portion to each other, however Clarkson discloses a single pipe handlebar for vehicles (see Fig. 1). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Yamasaki by using the single pipe handlebars taught by Clarkson, with the motivation of providing a more realistic handle mechanism for the user.

9. Claims 11, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US Patent No. 6,083,106) in view of Yamasaki et al. (US Patent No. 5,547,382), McClellion (US Patent No. 7,156,026 B2) and of Ito et al. (US Patent No. 4,589,532).

Regarding claims 11, 12 and 20, Yamasaki discloses a riding simulation system for providing an operator with a pseudo-experience of running conditions of a motorcycle by displaying scenery seen to the rider as a video image on a display based on an operating condition upon an operation by the operator (see Fig 1; column 6, lines 30-52) and detecting a gear change by a sensor provided at a gear change pedal (see Fig 33; column 16, lines 45-61), and the gear change feeling in an actual two-wheeled vehicle is simulated (column 16, lines 58-61) (as per claim 11), and the combination of McDowell, Yamasaki and McClellion disclose the step mechanism, connection shaft, and frame portion mechanism assembly of claim 11, as described in the rejection of claim 1, above. It is noted that the above combination does not

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explicitly disclose a click generator adapted to generate a click feeling similar to a gear change in an actual motorcycle when a gear change is made by operating said gear change pedal, wherein the click generator comprises a support member disposed between a cover member and a support plate, and a ball member disposed in a hole formed in a shaft projecting from a support member, the cover member having a hole portion formed therein in which the ball member is engaged when said gear change pedal is in a center position (as per claim 11), and when said gear change is made by operating said gear change pedal, said ball member is released from said hole portion and thereafter again engaged in said hole portion, whereby a click sound and a vibration are generated (as per claim 12), and the click generator is part of a step mechanism which includes a gear change pedal unit also including a step adapted to accommodate the foot of the operator, the step and gear change pedal being disposed on one side of the mount plate, and the shaft accommodating the ball member being disposed on an opposite side of the mount plate (as per claim 20). However, Ito discloses a speed selector for a transmission that includes such a mechanism with a ball member engaged in a hole formed in a shaft (58) the cover member (casing 52) having a hole portion wherein the ball is clicked in and out of the two holes when a gear change is made (column 12, lines 1-50). Since Ito teaches a gear change mechanism with the structure described above that inherently creates a click noise and vibration, it would have been obvious to one skilled in the art at the time of the invention to modify the teachings of the above combination by using the Ito's gear change system to simulate a gear change click, and further to position the mechanism adjacent to the rider's left foot on the step mechanism, since this is where the actual mechanism is in a real motorcycle, with the motivation of alerting the rider when he has changed gears.

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Patent No. 5,547,382) in view of McClellion (US Patent No. 7,156,026 B2), McDowell (US Patent No. 6,083,106) and Tosaki et al. (US Patent No. 5,989,123).

Regarding claim 13, Yamasaki discloses a riding simulation system for providing an operator with a pseudo-experience of running conditions of a motorcycle by displaying scenery seen to the rider as a video image on a display based on an operating condition of a dummy operating mechanism operated by the operator (see Fig. 1; column 6, lines 30-52), the riding simulation system comprising a handle mechanism for operating a steering handle with a handle shaft portion as a turning fulcrum by the operator (see Fig. 36) and a frame portion for supporting the steering handle shaft portion (see Fig's. 25-27; column 13, line 66 - column 14, line 9). Yamasaki further discloses a handle moving motor 121a that provides a reaction force direction opposite turning in order to simulate the actual feel of steering (see Fig. 28; column 14, lines 55-65). Yamasaki does not explicitly disclose a step mechanism which is operated by the feet of the operator, and a connection shaft for connection said handle mechanism and said step mechanism. However, as noted in the rejection of claim 1, above, McDowell discloses such a mechanism, and it would have been obvious to one skilled in the art at the time of the invention to modify Yamasaki by adding such a mechanism, with the motivation being the same as that set forth in the rejection of claim 1, above. Yamasaki also does not explicitly disclose a frame portion including a cylindrical portion into which the handle shaft portion is inserted, and first to third main frames directly connected at equal angular interval intervals to upper left, right and front sides of the cylindrical portion, the first to third main frames being adapted to support said

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steering handle shaft portion, a single spring for giving a reaction force in a direction opposite to the turning direction of said steering handle when said steering handle is operated, wherein said spring is provided with a pair of clamping portions projected outwards from said steering handle shaft portion so as to clamp external surfaces of one of the main frames therebetween, wherein the first and second main frames are connected via a connection frame extending laterally between lower portions of the first and second main frames, wherein the connection shaft is mounted along a central portion of the connection frame extending between the lower portions of the at least first and second main frames. However, McClellion discloses a frame body with a cylindrical portion and two main frames. It would have been obvious to modify McClellion by adding a third main frame, as such a modification would be a simple duplication of parts, with the motivation of achieving the predictable result of adding more strength to the frame. It also would have been an obvious matter of design choice to specify the three main frames are at equal angular intervals, as applicant has not disclosed that the equal intervals provide an advantage or solve a stated problem relative to any other configuration. Further, it would have been obvious to combine McClellion's frame body with McDowell's connection shaft, with the motivation of providing extra structural support for McDowell's shaft. Furthermore, it would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Yamasaki by adding such a frame body with first to third main frames, with the motivation of providing structural support to Yamasaki's connection shaft. Yamasaki and McClellion do not explicitly disclose the claimed single spring reaction force mechanism, however Tosaki discloses a steering wheel control apparatus for a television game machine. The steering wheel control apparatus features a centering mechanism which provides a reaction force in the direction opposite the

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turning direction (column 19, lines 39-45). The centering mechanism is a single torsion spring 52 (see Fig's. 16 and 17; column 19, lines 56-65), wherein the single spring is provided with a pair of clamping portions 52a and 52b projected outwards from the steering handle shaft portion so as to clamp the frame portion/engagement cylinder 31 therebetween (see Fig's. 16 and 17; column 19, lines 56-65). It would have been obvious to one skilled in the art at the time of the invention to replace the handle moving motor of Yamasaki with the centering mechanism of Tosaki, with the motivation of reducing the cost of the parts. Tosaki does not explicitly disclose that the spring clamps the external surfaces of one of the main frames, however it would have been obvious to one skilled in the art at the time of the invention to place the spring clamps on external surfaces of one of the main frames instead since the invention of Tosaki requires a stationary pole for the torsion spring to provide reactive forces. Replacing the engagement cylinder with one of the main frames is a simple substitution of one known element for another to achieve predictable results.

Regarding claim 14, it is noted that Yamasaki, McClellion and Tosaki do not explicitly disclose elastic members interposed between the pair of clamping portions of the spring and the frame. Official Notice was taken in the Office Action dated 6/25/2007 that both the concept and advantages of placing damping material (elastic members) between points of contact was well known and expected in the art at the time of the invention. Since the applicant did not traverse the official noticed facts by specifically pointing out supposed errors, the official noticed facts taken in the rejection date 9/22/2007 are now considered admitted prior art. See MPEP 2144.03. Therefore it would have been obvious to one skilled in the art at the time of the invention to

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place elastic members interposed between the pair of clamping portions of the spring and frame, with the motivation of reducing noise.

11. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US Patent No. 6,083,106) in view of Yamasaki et al. (US Patent No. 5,547,382) and McClellion (US Patent No. 7,156,026 B2), and further in view of Uebel (US Patent No. 4,199,264).

Regarding claim 15, McDowell, Yamasaki and McClellion do not explicitly disclose a taper surface portion formed at an inner circumferential surface of a steering handle pipe constituting said steering handle mechanism, said taper surface portion gradually decreasing in diameter from the side of an end portion of said steering handle pipe, and a bracket having an engaging portion for engagement with said end portion of said steering handle pipe, having an outer circumferential surface gradually decreasing in diameter from the side of said engaging portion, and being inserted into said taper surface portion while holding said vibrator, wherein the bracket includes a pair of brackets, wherein each of the brackets includes a recess on an inner surface thereof, and when the brackets are mated together, the recesses of the mating brackets form a space in which the vibrator is disposed, wherein recesses have flat inner faces that oppose each other for engaging with left and right flat side of the vibrator. However, Uebel discloses such a vibrator structure, as described in the rejection of claims 5 and 6, above. It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of McDowell and Yamasaki by using the vibrator mechanism taught by Uebel so that the taper

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portion of Uebel's vibrator surrounds the steering handle pipe, with the motivation being the same as that set forth in the rejection of claims 5 and 6, above.

Regarding claim 16, Yamasaki further discloses the vibrator includes an eccentrically mounted weight (see Fig. 36; column 17, line 22-37). Yamasaki does not explicitly disclose a bracket having a hollow space, the bracket being screw-engaged with an portion of a steering handle pipe constituting said steering handle mechanism, wherein said vibrator is inserted into the inside of said steering handle pipe in the state of being held by said bracket, wherein the vibrator includes an eccentrically mounted weight extending from an outer end of the vibrator so as to be disposed in the hollow space. However, as disclosed in the rejection of claim 15, above, Uebel discloses a similar vibrator mechanism that could easily be first to the handlebars. It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of McDowell and Yamasaki by using the vibrator mechanism taught by Uebel including the flat recesses engaging the inner circumference of the pipe, and using this mechanism in the handlebars taught by Yamasaki, with the motivation of propagating the maximum possible vibrations between the vibrator and the handlebars. Uebel does not explicitly disclose the vibrator is screw engage with the pipe, as required, however as Official Notice was taken in the previous Office Action dated 6/25/2007 and not traversed, this feature is now admitted prior art, and therefore it would have been obvious to one skilled in the art at the time of the invention to secure the vibrator bracket of Uebel's system with a screw or screws, with the motivation of securing the bracket and vibrator in place.

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12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US Patent No. 6,083,106) in view of Yamasaki et al. (US Patent No. 5,547,382) and McClellion (US Patent No. 7,156,026 B2), and further in view of Tosaki et al. (US Patent No. 5,989,123).

Regarding claim 17, McDowell and Yamasaki do not explicitly disclose the claimed single spring reaction force mechanism. Tosaki discloses a steering wheel control apparatus for a television game machine. The steering wheel control apparatus features a centering mechanism which provides a reaction force in the direction opposite the turning direction (column 19, lines 39-45). The centering mechanism is a single torsion spring 52 (see Fig's. 16 and 17; column 19, lines 56-65), wherein the single spring is provided with a pair of clamping portions 52a and 52b projected outwards from the steering handle shaft portion so as to clamp the frame portion/engagement cylinder 31 therebetween (see Fig's. 16 and 17; column 19, lines 56-65). It would have been obvious to one skilled in the art at the time of the invention to replace the handle moving motor of Yamasaki with the centering mechanism of Tosaki, with the motivation of reducing the cost of the parts. Tosaki does not explicitly disclose that the spring clamps the external surfaces of one of the main frames, however it would have been obvious to one skilled in the art at the time of the invention to place the spring clamps on external surfaces of one of the main frames instead since the invention of Tosaki requires a stationary pole for the torsion spring to provide reactive forces. Replacing the engagement cylinder with one of the main frames is a simple substitution of one known element for another to achieve predictable results.

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13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Patent No. 5,547,382) in view of Uebel (US Patent No. 4,199,264), and further in view of McDowell (US Patent No. 6,083,106) and McClellion (US Patent No. 7,156,026 B2).

Regarding claim 18, Yamasaki discloses a step mechanism comprising a brake pedal and a gear change pedal which are operated by the feet of the rider (see Fig. 33; column 6, lines 1-29; column 16, lines 45-61). Yamasaki does not explicitly disclose a connection shaft for connecting said steering handle mechanism and said step mechanism to each other, said connection shaft provided to be extendable and contractible along the axial direction thereof. However, McDowell discloses such a telescopic shaft (column 6, lines 7-22). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Yamasaki by using the telescopic connection shaft taught by McDowell, with the motivation of making the steering controls adjustable for people of different heights and reaches. Yamasaki does not explicitly disclose a frame body having a cylinder portion and at least two main frames, wherein said steering handle mechanism is supported by the cylinder portion, and the connection shaft is disposed midway between and is supported by lower portions of the first to third main frames. However, as previously discussed McClellion discloses such a frame body for a simulation station. It would have been obvious to one skilled in the art to modify the teachings of Yamasaki by using providing the frame body taught by McClellion, with the motivation of giving the assembly more structural support.

14. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Patent No. 5,547,382) in view of McClellion (US Patent No. 7,156,026 B2) and Tosaki et al.

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(US Patent No. 5,989,123), and further in view of McDowell (US Patent No. 6,083,106) and Simpkins et al. (US Patent No. 5,431,569).

Regarding claim 19, Yamasaki discloses the step mechanism comprises a brake pedal and a gear change pedal which are operated by the feet of the operator (see Fig. 33; column 6, lines 1-29; column 16, lines 45-61). Yamasaki does not explicitly disclose said connection shaft is provided to be extendable and contractible along the axial direction thereof, and wherein the connection shaft is inclinable by a predetermined amount relative to each of the first to third main frames. However, McDowell discloses such a telescopic shaft (column 6, lines 7-22), and Simpkins discloses that it is well known in the art to provide an inclinable mechanism to provide for foot controls that are movable (see Fig. 1). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Yamasaki by using the telescopic connection shaft taught by McDowell, with the motivation of providing a direct connection between the foot controls and hand controls, and it would have been obvious to one skilled in the art at the time of the invention to modify the teachings of the combination by making the foot controls inclinable relative to the main frame, with the motivation of accommodating riders of different sizes.

Response to Arguments

15. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Egloff whose telephone number is (571) 270-3548. The examiner can normally be reached on M-F 7:30am - 5:00 pm EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached at (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Kathleen Mosser/
Primary Examiner, Art Unit 3715

Peter Egloff